

# National Airspace System NAS Implementation Facts



## Typical Implementation Time Requirements for Establishing/Relocating FAA Facilities:

The following is a list of typical FAA facility implementation projections (in months). It assumes an ideal site already under FAA lease, no implementation issues and immediate availability of resources (labor and equipment). The estimated durations start with receipt of project funding and end with facility commissioning. If a reimbursable agreement is required to provide project funding, add at least three to six months to define project scope, estimate costs, coordinate agreement (internally and externally), sign agreement, and receive project authorization funding. If demolition of an existing site is required, that time should also be added to these figures:

### Facility Implementation Projections

| Facility | Duration  |
|----------|-----------|
| ALSF-2   | 13 months |
| ASOS     | 3 months  |
| ASR      | 25 months |
| ATCT     | 60 months |
| AWOS     | 3 months  |

| Facility | Duration  |
|----------|-----------|
| ILS      | 22 months |
| LLWAS    | 7 months  |
| MALSR    | 9 months  |
| RT/R     | 13 months |
| VOR      | 16 months |

Every project has unique elements that can shorten or lengthen an implementation schedule. Accordingly, we recommend that the project sponsor coordinate its proposed schedule with the Region's National Airspace System (NAS) Implementation Center (ANI-X00) for concurrence.

## Implementation Specifics:

### I. Planning Phase\*

a. Any facility with radio equipment (RT/R, VOR, ILS, etc) requires frequency approval from the FAA's Frequency Management Section for a new location. This process takes approximately 6 months and should be completed in advance of approach procedures (as applicable).

b. Any facility that requires approach/enroute procedures development should be sited and coordinated with the Regional Airspace Procedures Team (RAPT) approximately one year in advance of construction.

c. Any facility that requires approach/enroute procedures must pass flight inspection at least 60 days in advance of the chart dates. Chart dates are cyclical and are set years in advance. Coordinate a chart date during the initial planning phase with Airways Facilities (AF).

d. All facility relocations should be analyzed to determine if an in-service relocation is required. An in-service relocation is designed to eliminate facility downtime and is more expensive than planned outage relocation. Often, in-service relocations require a duplicate set of equipment to be installed at the new site. The logistics and costs associated with a duplicate set of equipment must be included in the reimbursable agreement.

e. Projects that require FAA procurement of electronics equipment are subject to the scheduling needs of FAA's

National Work Plan. The project schedule shall be coordinated with the FAA program office to determine if the equipment can be made available and any factors that may impact its' availability.

f. Any project that is subject to National Environmental Policy Act (NEPA) compliance should incorporate the time necessary in the project schedules for completion of the required actions. In developing the schedule, consideration should be given to the potential community opposition as well as the intricacy of the issue itself. NEPA compliance was not considered in the facility implementation projections.

### II. Design Phase\*\*

a. A real estate lease for the new property must be negotiated and signed in advance of awarding any construction contract. For AIP funded projects, the lease must be culminated prior to FAA takeover. Approval of the Environmental Assessment and Due Diligence Audit is required in advance of real estate negotiations. Due to the NEPA influence and the time it can take to acquire property, real estate acquisition was not considered in the facility implementation projections.

b. Design work performed in association with the relocation/establishment of FAA facilities requires coordination and review. Design Coordination is performed within the FAA on a periodic basis. It involves AF and ANI engineers (civil, electrical, mechanical, electronics), end users (maintenance personnel, local Air Traffic) and the Airports District Office. Each review typically takes 30 calendar days and includes a period for review, feedback meeting, and consolidation of comments. The FAA may choose to develop the drawings and specifications at the project sponsor's cost.

### III. Construction Phase\*\*

a. Construction work performed in association with the relocation/establishment of FAA facilities generally requires FAA inspection for quality assurance. The FAA may choose to perform the construction or construction contracting at the project sponsor's cost.

b. The reimbursable agreement usually includes electronics installation as an FAA role. The electronics team installs, tests and gains flight check approval (as applicable). The time it takes to perform this work is a function of project complexity and labor availability.

c. A facility cannot be commissioned until a Joint Acceptance Inspection is performed and the end users accept the facility for operation and/or maintenance. Exceptions identified in the Joint Acceptance Inspection must be addressed to the satisfaction of the end user. As-Built drawings will be submitted to the FAA, following the FAA Computer-Aided Engineering Graphic standards, for archival purposes.

*\*For projects establishing new facilities for the National Airspace System, some of these planning activities are initiated with the submittal of the non-fed package. When relocation of an existing FAA facility is required, ANI may perform these tasks as part of the reimbursable agreement.*

*\*\* In accordance with AC-5300-7, the "FAA shall have exclusive right to determine how all facets of the relocation of an FAA facility shall be accomplished."*

# FAA Airway Facilities Service Planning Requirements for NAS Facilities

## Introduction

FAA Airway Facilities Service (AF) is responsible for the operation and maintenance over 40,000 facilities that support the National Airspace System (NAS). At the FAA regional office level, AF has an in-service management branch (AXX-400) and an implementation branch (ANI-X00). During the planning phase of an airport development, projects that have the potential of interfering with the normal operation of a FAA facility should be coordinated with the region's AXX-400 to determine appropriate actions for protecting the integrity of the NAS. When this coordination does not happen in a timely manner, the impact to airport operations (and the associated cost) can be very significant.

## I. Formal Notification of Project

**A. On-Airport Projects** - The project proponent will complete and submit a detailed project proposal (including **FAA Form 7460-1 or 7480-1\***, as applicable) at least 60 days prior to contract award for any on-airport construction or alteration for analysis by the FAA. The form will be submitted to the Airports Division, Airports District Office (ADO) or state aviation office, as applicable. Where the project includes establishing a NAS facility, the airport will also follow the requirements outlined in section III.

**B. Off-Airport Projects** - The project proponent will submit **FAA Form 7460-1\*** to the region's Air Traffic Division for any construction or alteration that is located off airport property. These projects include, but are not limited to, any structures that may be temporary (e.g., construction cranes) or permanent (e.g., water/radio towers, and buildings). Where the project includes establishing a NAS facility, the airport will also follow the requirements outlined in section III.

### C. Projects that Impact FAA Facilities\*\*

1. The project proponent will submit an Airport Layout Plan (ALP) update through the ADO to obtain an Airway Facilities (AF) review for obvious problems.
2. A facility may be affected with regards to clearances, line of sight, ground plane, or physical location. ALP updates typically do not describe improvements in sufficient detail to make a determination as to how they might impact existing facilities. As an extra precaution, the project proponent should submit written notification of any development project that may impact these factors to the region's Airway Facilities Division Manager (AXX-400) during the initial planning phases of the project. This notification may include a contact and description of the physical aspects of the project for analysis.
3. If modification or relocation of a FAA facility is required, the project proponent will normally enter into a **Reimbursable Agreement** with the FAA. Reimbursable agreements are defined under DOT Order 2300.1, FAA Order 2500.35 and Advisory Circular 150/5300-7. The agreement will identify the scope of work as well as roles and responsibilities of both parties. It will also include estimated FAA costs for work to be reimbursed by the propo-

nent. The agreement should be executed before the start of design, and it typically takes three to six months to develop, coordinate, and execute an agreement. Unless directed otherwise by AF, the Airport Integration Engineer (AIE) will be the main point of contact for gathering and disseminating information. The AIE's planning insights/support is provided at no cost to the proponent and can help the proponent determine an optimum course of action during the planning stages of the project. The AIE may be reached through the region's NAS Implementation Center.

**4. FAA Underground Cables** - The project proponent will coordinate with local FAA maintenance personnel to assist with identifying existing and proposed underground utilities that serve FAA facilities. If underground utilities are located within the work area, then the project proponent must work with local FAA personnel to develop a risk mitigation plan.

## II. Response to Formal Notification

The project proponent will receive an analysis based on the information received. It is the project proponent's responsibility to take appropriate action to resolve issues identified during the review process.

## III. Non-Federal (non-Fed) Projects \*\*

**A. General** - A non-Fed facility establishment occurs when the project proponent intends to install a facility for use in the National Airspace System. For definition purposes, all projects that are funded by sources outside Airways Facilities organization (such as AIP and PFC) are treated as non-Fed and outlined in FAA Order 6700.20. These projects must be coordinated with the appropriate non-Fed Coordinator for that Region. Only equipment or facilities that have been approved by the FAA and the Federal Communications Commission (FCC) may be used. The project proponent should coordinate with the non-Fed Coordinator as soon as possible due to the time it takes to develop procedures and obtain frequency approvals. The non-Fed Coordinator may be reached through the Region's Airway Facilities Division.

**B. FAA Takeover Requirements** - Many facilities and systems are not eligible for FAA takeover. If the proponent intends to explore FAA takeover, it must send a letter in the project's earliest planning stage that identifies the proponent's intention to establish a facility and request FAA takeover. This letter should identify the facility(s), location, and project schedule. The source of funding should also be included because certain types of establishment projects funded under AIP grants are eligible for takeover due to statutory requirements. The letter will be sent to the Regional Administrator with a copy to the Airway Facilities Division Manager for consideration. If they determine that the facility is eligible for takeover, the facility's design and installation needs to be closely coordinated with AF. AF will identify requirements for a reimbursable agreement, remote



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maintenance monitoring, test equipment, spare parts, and technician training. When the work is complete, the project proponent will be required to enter into a **Transfer Agreement**. The Non-Fed Coordinator will be the main

point of contact for developing the Transfer Agreement, unless otherwise directed. The Transfer Agreement will include real estate requirements (description, permits, leases, etc.), transfer of utilities, system components, test equipment, real property, and spare parts provisions.

## IV. AF Regional Contacts

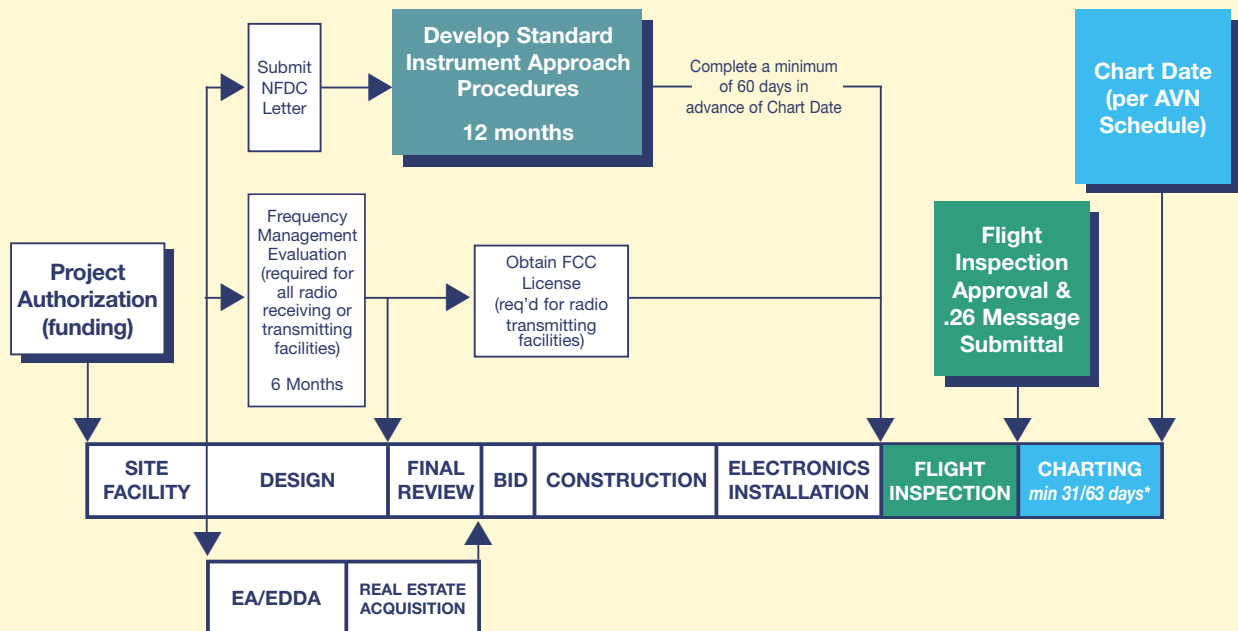
| Region             | States/Territories                  | Airway Facilities Division (AXX-400) | NAS Implementation Center (ANI-X00) |
|--------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| New England        | CT, MA, ME, NH, RI & VT             | 781-238-7400                         | 781-238-7450                        |
| Eastern            | DE, MD, NJ, NY, PA, VA & WV         | 718-553-3400                         | 718-553-4801                        |
| Southern           | AL, FL, GA, KY, MS, NC, PR, SC & TN | 404-305-6200                         | 404-305-6370                        |
| Great Lakes        | IN, IL, MI, MN, ND, OH, SD & WI     | 847-294-7302                         | 847-294-7365                        |
| Central            | IA, KS, MO & NE                     | 816-329-3400                         | 816-329-3500                        |
| Southwest          | AR, LA, NM, OK & TX                 | 817-222-4000                         | 817-222-4500                        |
| Alaska             | AK                                  | 907-271-5616                         | 907-271-5351                        |
| Northwest Mountain | CO, ID, MT, OR, UT, WY & WA         | 425-227-2400                         | 425-227-2450                        |
| Western-Pacific    | AS, AZ, CA, GU, HI, & NV            | 310-725-3400                         | 310-725-3450                        |

\* **FAA Form 7460-1 and 7480-1** are available through the Airports Division website at <http://www.faa.gov/arp/engineering>. Other associated notifications and procedures for handling airspace matters are described in FAA Order 7400.2

coordinated with the Airports Division or Airports District Office. Non-primary airports in block grant states may contact their state aviation department. For further guidance, visit the AIP homepage at <http://www.faa.gov/arp/510home.cfm>.

\*\* Projects that establish or impact NAS Facilities, in some circumstances, may be funded under the Airport Improvement Program (AIP). AIP funding necessitates that the projects also be

\*\*\* The FAA's Construction Leaseback program requirements are determined by AFZ-400 at 202-267-8871 or 202-267-7401.



## TYPICAL PROJECT PROGRESSION LINE TO ESTABLISH A NAS FACILITY (Items required to establish approach procedures are shaded)

Note: NEPA Compliance requirements are not included due to local and regional variables.

\* 63 days if the procedure involves an enroute facility. Please verify requirements when establishing your project schedule.

# Frequently Asked Questions (FAQs) about FAA Reimbursable Agreements and Relocations of FAA Facilities



## **Q: What is a Reimbursable Agreement?**

**A:** A Reimbursable Agreement is defined as a written document executed by the FAA and a user agency under which the FAA provides, and is reimbursed for, material or services. As it pertains to Sponsor development and relocation of FAA facilities on an airport, it acts as a contract between the Airport Sponsor and FAA whereby the Sponsor pays the FAA for its associated costs.

## **Q: How early does the Airport Sponsor need to advise the FAA of a potential relocation requirement of FAA-owned facilities?**

**A:** As early as possible. Ideally, the FAA should be advised during the environmental process stage of the project.

## **Q: How and whom in the FAA does the Airport Sponsor notify of potential relocation of FAA facilities?**

**A:** The Sponsor should provide written notification to both its local ADO representative, and its regional Airway Facilities Division Manager of the proposed work and the tentative schedule for the work. The Sponsor is still responsible for submitting an FAA 7460-1 form, and ensuring its ALP includes the proposed development, but these items will not necessarily trigger the required FAA coordination and review of the potential relocation. On all FAA-owned facilities, AF management reserves the right to determine how and when a relocation/modification will be handled.

## **Q: Is it important to involve the local FAA SMO and SSC in the design process?**

**A:** Yes. Representatives from the local AF offices, the System Support Center (SSC) and System Management Office (SMO), can provide guidance about location of underground utilities, facility capabilities and other local requirements. In addition, their formal role in the design review process should be detailed in advance.

## **Q: What document allows the FAA Airway Facilities Division to begin formal coordination for relocation of FAA-owned facilities?**

**A:** The Sponsor should enter into a Reimbursable Agreement with the FAA prior to starting work or coordination on a potential relocation. However, in order to define the project scope so that a Reimbursable Agreement can be developed, some initial coordination is required. For straight forward projects, the initial coordination can be performed without a formal agreement. On more complex projects, the Sponsor and FAA may enter into a Limited Reimbursable Agreement (LRA) to provide the FAA with funding for preliminary engineering activities such as facility siting, project scope development and cost estimating. The LRA is a commitment from the Sponsor to reimburse the FAA for costs incurred in the preliminary stage. The Sponsor should coordinate with its local ADO representative, AXX-400 and ANI-X00 Airport Integration Engineer (AIE) to discuss how this can be accomplished for the specific project.

## **Q: How would this LRA differ from a full Reimbursable Agreement? Can the LRA be amended?**

**A:** A full Reimbursable Agreement will include more project specific details, such as estimated FAA costs, scope of work, review and inspection requirements, etc. The LRA would be much simpler, and would generally cover only preliminary work, and might not have much detail other than a dollar cap on the work. If the parties agree, the LRA can later be amended to include project specific details. The circumstances for amending the agreement can be essentially anything in which the FAA and Sponsor concur. The particulars of 'how' depends on the format of the agreement, and the Sponsor should contact the FAA to discuss those particulars.

## **Q: Of what does the full FAA Reimbursable Agreement consist?**

**A:** The specific items included in an FAA Reimbursable Agreement are outlined in DOT Order 2300.1, FAA Order 2500.35, and Advisory Circular 150/5300-7. In general, a Reimbursable Agreement includes a detailed project scope, a listing of services and material to be supplied, estimated labor and material costs, training costs, supervision costs, delivery schedules, and billing terms. Airport Sponsors and consultants are encouraged to familiarize themselves with the above listed documents to better understand Reimbursable Agreements.

## **Q: If the FAA-owned facility relocation design is being performed by the Airport Sponsor's Consultant, or someone other than the FAA, what design reviews by the FAA will be performed?**

**A:** The required reviews will vary from region to region and from project to project. The Sponsor, Designer, and FAA develop a schedule which includes design submittal milestones, review durations, review parties to be involved, required construction inspections, inspection milestones, the inspecting parties to be involved, etc. These requirements should be part of the written Reimbursable Agreement.

## **Q: Will the FAA approve the Airport Sponsor's FAA facility relocation design prior to advertisement for bids?**

**A:** Final FAA approval and project bidding should be included as part of the agreement requirements. Clearly, the goal should be that all review comments are received and addressed, and the plans approved by FAA prior to advertisement for bids. An FAA approval signature block on the plan set is suggested to ensure that all parties understand that the FAA review is complete, and to identify the approving representative.

## **Q: Does the FAA have drafting and CAD standards for the design plans and record drawings for FAA facilities?**

**A:** Yes. The FAA has a national drafting standard (FAA-Std-002) that can be utilized for FAA facility designs and record drawings. Some regions, however, may not be able to conform to the standards due to existing legacy systems, or their own region-specific requirements. The Sponsor or Designer should verify what the particular region is using for standards early in the design process.